**Amendments to the Drawings:**

The first attached sheet of drawings includes changes to each of FIGS. 1, 2 and 3. This sheet, which includes FIGS. 1, 2 and 3, replaces the original sheet. Each of FIGS. 1, 2 and 3 have been designated as "Prior Art".

The second attached sheet of drawings includes changes to FIG. 4A. This sheet, which includes FIGS. 4A, 4B and 4C, replaces the original sheet. In FIG. 4A, reference numeral "406" has been corrected to "403" to designate a composite side, and reference numeral "406" has been added to designate the linear apex.

The third attached sheet of drawings includes changes to FIG. 4G. This sheet, which includes FIGS. 4D, 4E, 4F, 4G and 4H, replaces the original sheet. In FIG. 4G, the lead line for reference number 434 has been extended to contact linear apex 434.

The fourth attached sheet of drawings includes changes to FIG. 6A and to FIG. 6B. This sheet, which includes FIGS. 5, 6A and 6B, replaces the original sheet. In FIGS. 6A and 6B, "S" has been corrected to "Σ", the "4" above "S" has been deleted, and the "∧" above "y" has been deleted.

Attachment: Replacement Sheets
Annotated Sheets Showing Changes

## REMARKS

Applicant has amended claims 1 and 17. Various paragraphs throughout the specification have been amended. Figures 1, 2, 3, 4A, 4G, 6A and 6B have also been amended.

Claims 1-31 are pending. Reconsideration of this application, as amended, is requested.

## Drawings

Figures 1, 2 and 3 have been designated as "Prior Art".

In Figure 4A, reference numeral "406" has been corrected to "403" to designate a composite side, and reference numeral "406" has been added to designate the linear apex.

Additionally, Figures 6A and 6B have been amended to correct "S" to "Σ". Additional changes to Figures 6A and 6B, and to Figures 4A and 4G, have also been made, as described in the previous section titled "Amendments to the Drawings".

## Specification

Page 13, line 13 and the surrounding text has been amended.

## The Claims, Generally

The presently claimed invention is directed to an abrasive array and to an abrasive article. Each includes an array of protruding units, the array being at least two by two. Each unit has a base defined by a perimeter, which includes a first side and a second side opposite to the first side. Distal to the base, each unit has a distal linear region, which when projected on to a plane that is coplanar with its respective base, extends between a non-central point on the first side of the base and a non-central point on the second side of the base. Additionally, this distal linear region is not positioned at the perimeter of the base; that is, it does not extend to the perimeter. In other words, the distal linear region is not positioned orthogonal (or, 90 degrees) to the perimeter.

**Section 102 Rejections**

Claims 1, 2, 5, 7, 9, 11, 13, 15-18, 21, 23, 25, 27, 29 and 31 were rejected under 35 U.S.C. 102(b) as anticipated by Pieper et al. (U.S. Patent No. 5,152,917). Applicant disagrees with this rejection.

Applicant does not disagree that Pieper et al. discloses an abrasive article and an abrasive array of protruding units. The article and array of Pieper et al. includes protruding units (composites) that can be of various shapes, and FIG. 9 of Pieper et al. illustrates a sawtooth pattern of protruding units, each unit having a distal linear region or apex that extends between a non-central point on the first side of the base and a non-central point on the second side of the base. The protruding units have linear grooves therebetween.

Pieper et al. does not anticipate the pending claims, at least for the following reasons.

Pieper et al. does not disclose a two-by-two array of protruding units having the requisite characteristics of the pending claims. FIG. 9 of Pieper et al. merely shows a "one-by" array, the array being only one unit wide (in the paper direction). Two-by-two arrays are illustrated in FIGS. 4B, 4C, 6A and 6B of the pending application.

Pieper et al. also does not disclose protruding units, as required by the pending claims, where the distal linear region is not positioned at the perimeter of the base. FIG. 9 of Pieper et al. shows the distal linear apex being at the perimeter of the base. The apex forms a 90 degree angle with the base. Protruding units where the distal linear region is not positioned at the perimeter are illustrated in FIGS. 4A, 4B, 4C, 4D, 4E, 4G, 4H, and 6B.

At least for these reasons, Applicant contends that Pieper et al. does not anticipate independent claims 1 and 17, and claims 2, 5, 7, 9, 11, 13, 15-16, 18, 21, 23, 25, 27, 29 and 31 which depend therefrom. Applicant requests withdrawal of this rejection.

Claims 1, 2, 5, 6, 8, 10, 12, 14, 16-18, 22, 24, 26, 28 and 30 were rejected under 35 U.S.C. 102(b) as anticipated by Rouser et al. (U.S. Patent No. 5,201,101). Applicant disagrees with this rejection.

Rouser et al. is to a method and system for mechanically fastening (attaching and detaching) articles with structures such as pyramids. The mechanical fastening system of Rouser et al. is analogous to hook and loop (e.g., Velcro (TM) fastening system) in that the fastening system is provided on two articles to be fastened together. The invention of Rouser et al. is the

structured (e.g., pyramidal) fastening system. With the system of Rouser et al., abrasive articles can be fastened; see FIG. 9, which illustrates an article having abrasive particles 7 and a structure surface 14 on the side opposite the abrasive particles, and FIG. 1 which illustrates a hand pad abrasive holder 9 having an abrasive article thereon.

The claims pending in the currently application are not anticipated, and not even suggested, by Rouser et al. Although Rouser et al. does provide pyramids that can be axial bent and torsionally twisted or flexed, Rouser et al. does not teach having a distal linear region extending as recited in the pending claims. Protruding units where the distal linear region extends between non-central points on opposite first and second side and is not positioned at the perimeter are illustrated in FIGS. 4A, 4B, 4C, 4D, 4E, 4G, 4H, and 6B. Rouser et al. provides flat-topped pyramidal distal ends which are not linear regions.

Even more, Rouser et al. does not anticipate the pending claims at least because Rouser et al. does not disclose an abrasive array of protruding units, the units being an abrasive coating comprising abrasive grains. See FIG. 1 of the pending application for a detailed view of an abrasive coating or abrasive array. The structures of Rouser et al. are polymeric structures, such as PVC (polyvinyl chloride); they are not abrasive structures having abrasive grains therein.

At least for these reasons, Applicant contends that Rouser et al. does not anticipate independent claims 1 and 17, and claims 2, 5, 6, 8, 10, 12, 14, 16, 18, 22, 24, 26, 28 and 30 which depend therefrom. Applicant requests withdrawal of this rejection.

**Section 103 Rejections**

Claims 3, 4, 19 and 20 were rejected under 35 U.S.C. 103(a) as unpatentable over Pieper et al. and/or Rouser et al. Applicant disagrees with this rejection.

The teachings and lackings of Pieper et al. and Rouser et al. have been discussed above. The Office Action indicates that the both Pieper et al. and Rouser et al. disclose the claimed invention except for the specific size. Applicant disagrees. There are many more lackings in Pieper et al. and Rouser et al. than merely the specific size.

Applicant contends that the claims, as amended, are patentable, and requests withdrawal of the rejections.

**Summary**

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone Applicant's attorney Rick L. Franzen, Reg. No. 51,702, at 651.736.6432.

Respectfully submitted,

Date: 3/31/2005

Mara E. Liepa
Reg. No. 40,066

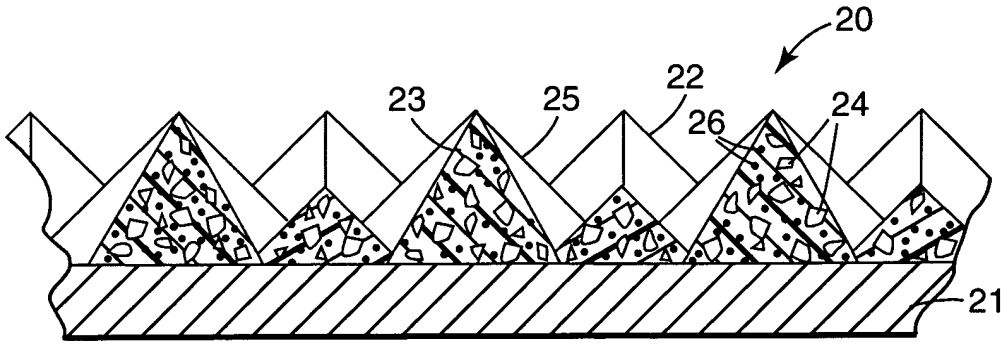


*Fig. 1*

Prior Art — Added

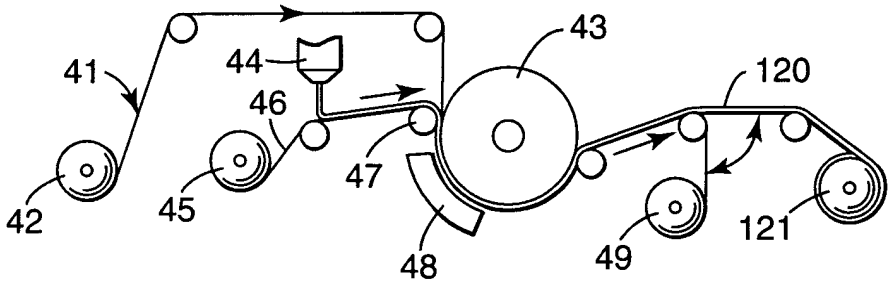


*Fig. 2*

Prior Art — Added

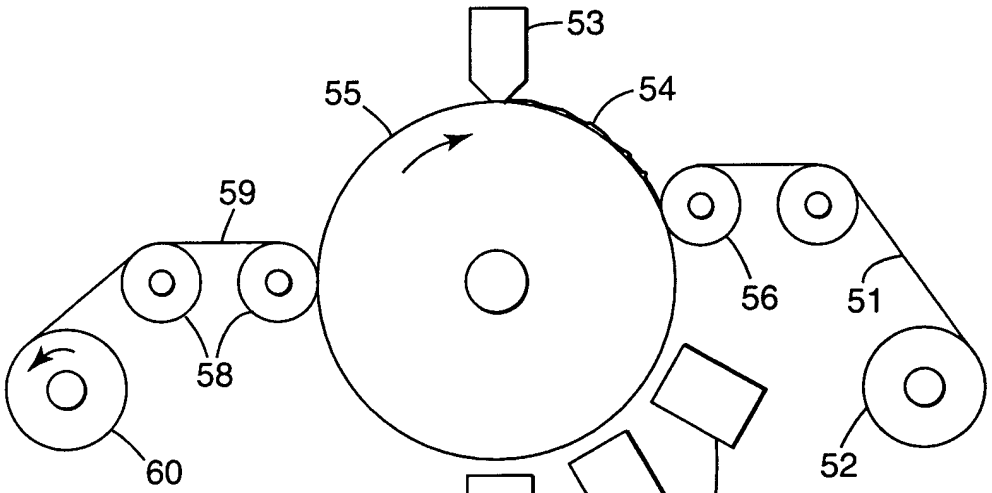


*Fig. 3*

Added — Prior Art

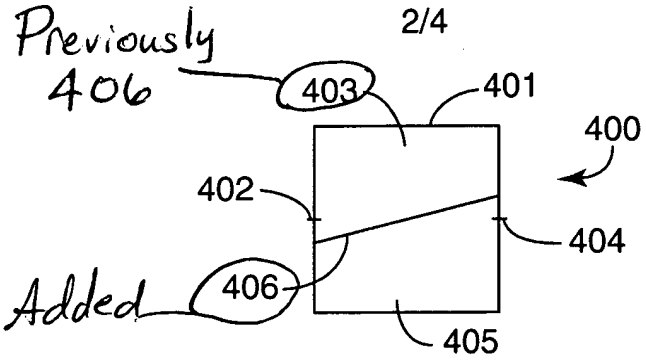


*Fig. 4A*

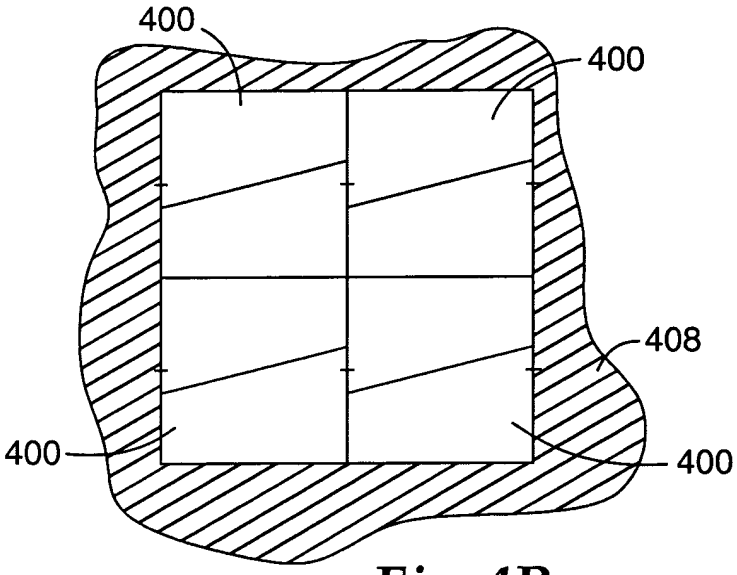


*Fig. 4B*

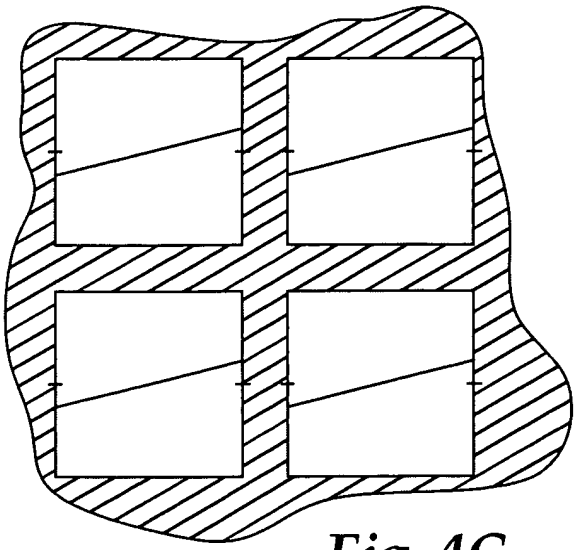

*Fig. 4C*

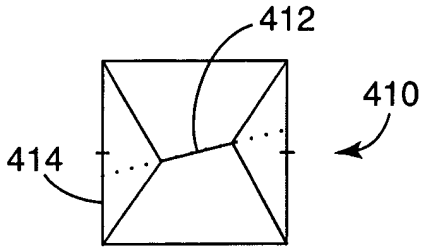


*Fig. 4D*

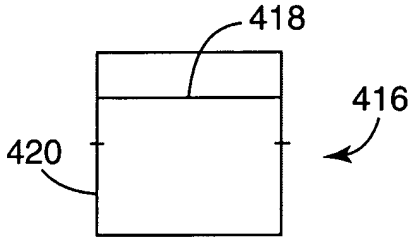


*Fig. 4E*

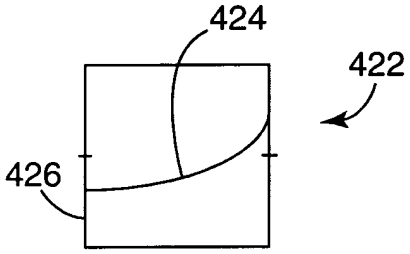


*Fig. 4F*

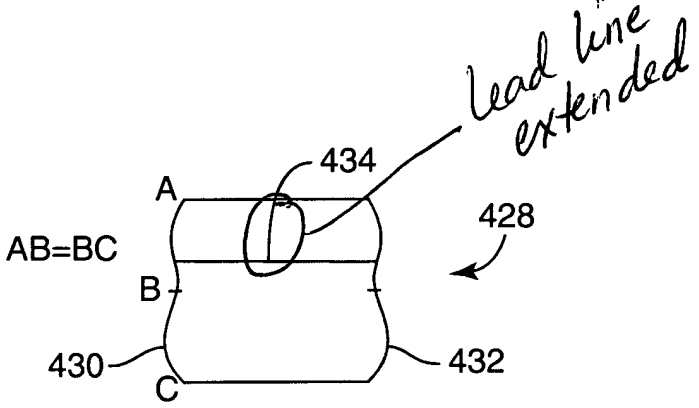


*Fig. 4G*

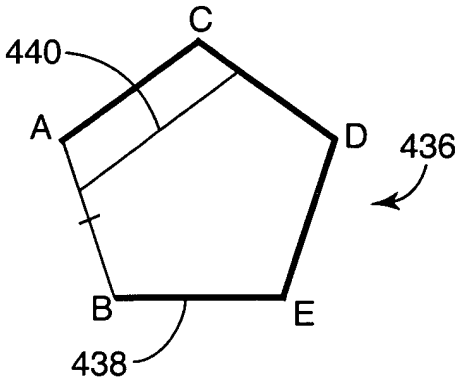


*Fig. 4H*

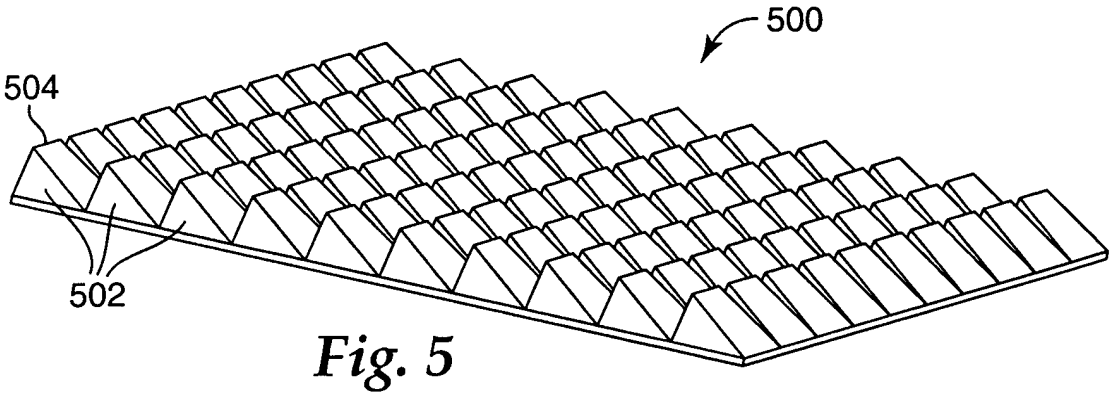


*Fig. 5*

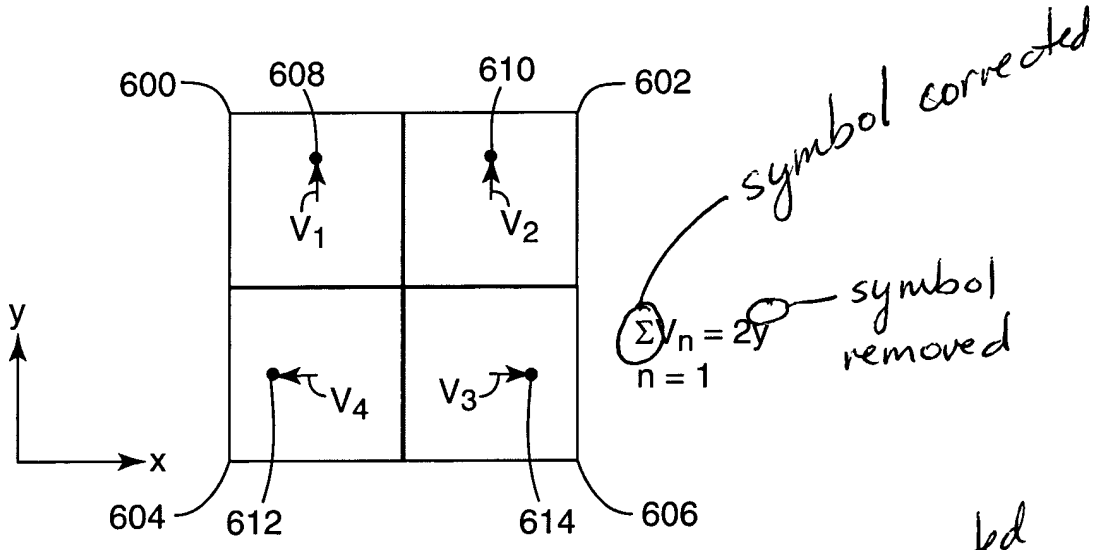


*Fig. 6A*

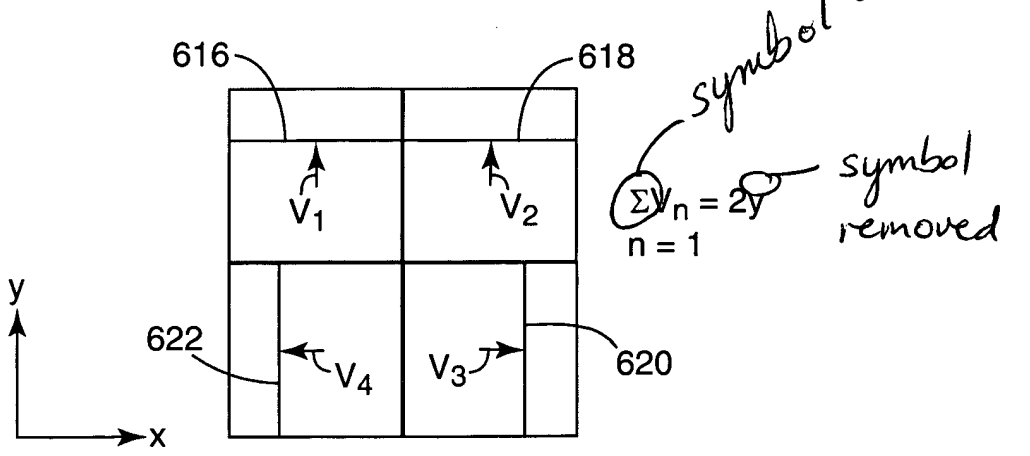


*Fig. 6B*